

**UNIVERSITY  
OF VIRGINIA**

**ENVIRONMENTAL HEALTH *and* SAFETY**  
Special Materials Handling Facility

BF

September 13, 2007

Ms. Becky L. France  
Environmental Engineer Senior  
Department of Environmental Quality  
3019 Peters Creek Road  
Roanoke, VA 24019

**DEQ-WCRO**

**SEP 17 2007**

**RECEIVED**

RE: VPDES –Permit VA0075361; VPDES Permit Application, UVA Mountain Lake Biological Station

Dear Ms. France:

Attached are the three completed VPDES discharge permit applications related to the waste water treatment plant located at the University of Virginia Mountain Lake Biological Station in Giles County. If you or your staff have any questions, please contact Walter Rogers ((434) 982-4665) or me at (434) 982-4901 or via email at [sitler@virginia.edu](mailto:sitler@virginia.edu).

Sincerely,



Jeffrey A. Sitler, CPG  
Environmental Compliance Manager

Attachments: Form 2A NPDES  
VPDES Permit Application Addendum  
VPDES Sewage Sludge Permit Application

CC: Walter Rogers  
Julian McCroskey  
Edmund Bordie

VPDES Permit Application  
University of Virginia  
Mountain Lake Biological Station  
335 Salt Pond Road  
Pembroke, Virginia 24136

September 13, 2007

Submitted to:  
Ms. Becky L. France  
Environmental Engineer Senior  
Virginia Department of Environmental Quality  
3019 Peters Creek Road  
Roanoke, VA 24019

Prepared by:  
Jeffrey A. Sitler, CPG  
Environmental Compliance Manager  
Office of Environmental Health and Safety  
University of Virginia  
P.O. Box 400322  
Charlottesville, VA 22904-4322  
sitler@virginia.edu  
434-982-04901

Prepared for:  
Walter Rogers  
Superintendent  
Facilities Management  
University of Virginia  
P.O. Box 400726  
Charlottesville, VA 22904-4726  
434-982-4665

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FACILITY NAME AND PERMIT NUMBER:

VA0075361 - Mountain Lake Biological Station

SEP 17 2007

Form Approved 1/14/99  
OMB Number 2040-0086FORM  
2A  
NPDES

## NPDES FORM 2A APPLICATION OVERVIEW

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## APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

## BASIC APPLICATION INFORMATION:

- A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. **Additional Application Information for Applicants with a Design Flow  $\geq 0.1$  mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. **Certification.** All applicants must complete Part C (Certification).

## SUPPLEMENTAL APPLICATION INFORMATION:

- D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
  - 1. Has a design flow rate greater than or equal to 1 mgd,
  - 2. Is required to have a pretreatment program (or has one in place), or
  - 3. Is otherwise required by the permitting authority to provide the information.
- E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
  - 1. Has a design flow rate greater than or equal to 1 mgd,
  - 2. Is required to have a pretreatment program (or has one in place), or
  - 3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
  - 1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
  - 2. Any other industrial user that:
    - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
    - b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
    - c. Is designated as an SIU by the control authority.
- G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

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## BASIC APPLICATION INFORMATION

### PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

#### A.1. Facility Information.

Facility name Mountain Lake Biological Station Wastewater Treatment Plant

Mailing Address 335 Salt Pond Road  
Pembroke, VA 24136-9724

Contact person Julian McCroskey

Title Caretaker/Plant Operator

Telephone number (540) 626-7171

Facility Address State Route 668 (Near Mountain Lake Resort)  
(not P.O. Box) Giles County, VA 24316-3094

#### A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name University of Virginia

Mailing Address Facilities Management, P.O. Box 400726  
Charlottesville, VA 22906-4726

Contact person Walter Rogers (alternate contact - Jeffrey Sitler, Environmental Compliance Mgr.)

Title Project Manager

Telephone number (434) 982-4665 ((434) 982-4901)

Is the applicant the owner or operator (or both) of the treatment works?

☒ owner ☒ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☐ facility ☒ applicant

#### A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES VPDES VA0075361 PSD \_\_\_\_\_

UIC \_\_\_\_\_ Other \_\_\_\_\_

RCRA \_\_\_\_\_ Other \_\_\_\_\_

#### A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

| Name                               | Population Served | Type of Collection System | Ownership        |
|------------------------------------|-------------------|---------------------------|------------------|
| <u>Mtn. Lake Bio. Sta.</u>         | <u>100</u>        | <u>Seperate</u>           | <u>Municipal</u> |
| _____                              | _____             | _____                     | _____            |
| _____                              | _____             | _____                     | _____            |
| Total population served <u>100</u> |                   |                           |                  |

**A.5. Indian Country.**

- a. Is the treatment works located in Indian Country?

☐ Yes ☒ No

- b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

☐ Yes ☒ No

**A.6. Flow.** Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

- a. Design flow rate 0.009 mgd

|                                   | <u>Two Years Ago</u> | <u>Last Year</u> | <u>This Year</u> |     |
|-----------------------------------|----------------------|------------------|------------------|-----|
| b. Annual average daily flow rate | <u>0.0056</u>        | <u>0.0043</u>    | <u>0.0050</u>    | mgd |
| c. Maximum daily flow rate        | <u>0.0094</u>        | <u>0.0065</u>    | <u>0.0081</u>    | mgd |

**A.7. Collection System.** Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

☒ Separate sanitary sewer 100.00 %  
☐ Combined storm and sanitary sewer \_\_\_\_\_ %

**A.8. Discharges and Other Disposal Methods.**

- a. Does the treatment works discharge effluent to waters of the U.S.? ☒ Yes ☐ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1  
ii. Discharges of untreated or partially treated effluent \_\_\_\_\_  
iii. Combined sewer overflow points \_\_\_\_\_  
iv. Constructed emergency overflows (prior to the headworks) \_\_\_\_\_  
v. Other \_\_\_\_\_

- b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? ☐ Yes ☒ No

If yes, provide the following for each surface impoundment:

Location: \_\_\_\_\_

Annual average daily volume discharged to surface impoundment(s) \_\_\_\_\_ mgd

Is discharge ☐ continuous or ☐ intermittent?

- c. Does the treatment works land-apply treated wastewater? ☐ Yes ☒ No

If yes, provide the following for each land application site:

Location: \_\_\_\_\_

Number of acres: \_\_\_\_\_

Annual average daily volume applied to site: \_\_\_\_\_ Mgd

Is land application ☐ continuous or ☐ intermittent?

- d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? ☐ Yes ☒ No

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If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name: NA

Mailing Address: \_\_\_\_\_

Contact person: NA

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

For each treatment works that receives this discharge, provide the following:

Name: NA

Mailing Address: \_\_\_\_\_

Contact person: NA

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

If known, provide the NPDES permit number of the treatment works that receives this discharge. \_\_\_\_\_

Provide the average daily flow rate from the treatment works into the receiving facility. \_\_\_\_\_ mgd

- e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? \_\_\_\_\_ Yes ☒ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method: \_\_\_\_\_

Is disposal through this method \_\_\_\_\_ continuous or \_\_\_\_\_ intermittent?

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**If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."**

a. Outfall number 001

b. Location

(City or town, if applicable)  
Giles County

(Zip Code)  
Virginia

(County)  
37 22' 30"  
(Latitude)

(State)  
80 31' 37"  
(Longitude)

c. Distance from shore (if applicable)

NA ft.

d. Depth below surface (if applicable)

NA ft.

e. Average daily flow rate

mgd

f. Does this outfall have either an intermittent or a periodic discharge?

✓

Yes

No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs:

Continuous flow June through August

**Average duration of each discharge:**

Continuous

**Average flow per discharge:**

mgd

Months in which discharge occurs:

June through August

g. Is outfall equipped with a diffuser?

Yes

No

a. Name of receiving water Unnamed Tributary of Hunters Branch

b. Name of watershed (if known)

United States Soil Conservation Service 14-digit watershed code (if known):

NA

c. Name of State Management/River Basin (if known):

NA

United States Geological Survey 8-digit hydrologic cataloging unit code (if known):

NA

d. Critical low flow of receiving stream (if applicable):

|       |      |     |
|-------|------|-----|
| acute | 0.00 | cfs |
|-------|------|-----|

|         |      |     |
|---------|------|-----|
| chronic | 0.00 | cfs |
|---------|------|-----|

e. Total hardness of receiving stream at critical low flow (if applicable): NA mg/l of CaCO<sub>3</sub>

NA

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**A.11. Description of Treatment.**

a. What levels of treatment are provided? Check all that apply.

☐ Primary
 ☒ Secondary  
☐ Advanced
 ☐ Other. Describe: \_\_\_\_\_

b. Indicate the following removal rates (as applicable):

|   |         |   |
|---|---------|---|
| Design BOD <sub>5</sub> removal or Design CBOD <sub>5</sub> removal | 70 - 90 | % |
| Design SS removal   | 70 - 90 | % |
| Design P removal  | 25      | % |
| Design N removal  | 95      | % |
| Other _____   |         | % |

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

chlorination

If disinfection is by chlorination, is dechlorination used for this outfall? ☒ Yes ☐ No

d. Does the treatment plant have post aeration? ☒ Yes ☐ No

**A.12. Effluent Testing Information.** All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

| PARAMETER   | MAXIMUM DAILY VALUE |       | AVERAGE DAILY VALUE |       |                   |
|---|---------------------|-------|---------------------|-------|-------------------|
|   | Value               | Units | Value               | Units | Number of Samples |
| pH (Minimum)  | 6.79                | s.u.  |                     |       |                   |
| pH (Maximum)  | 8.12                | s.u.  |                     |       |                   |
| Flow Rate   | 0.0410              | mgd   | 0.0048              | mgd   | 13                |
| Temperature (Winter)  | NA                  |       |                     |       |                   |
| Temperature (Summer) <small>(data from 2004 through 2007)</small> | 24.6                | C     | 20.1                | C     | 271               |

\* For pH please report a minimum and a maximum daily value

| POLLUTANT | MAXIMUM DAILY DISCHARGE |       | AVERAGE DAILY DISCHARGE |       |                   | ANALYTICAL METHOD | ML / MDL |
|-----------|-------------------------|-------|-------------------------|-------|-------------------|-------------------|----------|
|           | Conc.                   | Units | Conc.                   | Units | Number of Samples |                   |          |

**CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.**

|  |        |     |          |      |          |  |           |          |
|--|--------|-----|----------|------|----------|--|-----------|----------|
| BIOCHEMICAL OXYGEN DEMAND (Report one) | BOD-5  | 18  | mg/l     | 5.66 | mg/l     |  | EPA405.1  | 2        |
|  | CBOD-5 |     |          |      |          |  |           |          |
| FECAL COLIFORM <i>E. Coli</i>          |        | 110 | #/100 ml | 29   | #/100 ml |  | SM 02223B | 2/100 ml |
| TOTAL SUSPENDED SOLIDS (TSS)           |        | 12  | mg/l     | 4.65 | mg/l     |  | EPA 160.2 | 4        |

**END OF PART A.**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**



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## BASIC APPLICATION INFORMATION

### PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate  $\geq 0.1$  mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

**B.1. Inflow and Infiltration.** Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

\_\_\_\_\_ gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

\_\_\_\_\_  
\_\_\_\_\_

**B.2. Topographic Map.** Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

**B.3. Process Flow Diagram or Schematic.** Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g. chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

#### B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☐ Yes ☐ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Responsibilities of Contractor: \_\_\_\_\_

**B.5. Scheduled Improvements and Schedules of Implementation.** Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

\_\_\_\_\_

- b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

☐ Yes ☐ No

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- c. If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

- d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

| Implementation Stage       | Schedule       | Actual Completion |
|----------------------------|----------------|-------------------|
|                            | MM / DD / YYYY | MM / DD / YYYY    |
| - Begin construction       | ___/___/___    | ___/___/___       |
| - End construction         | ___/___/___    | ___/___/___       |
| - Begin discharge          | ___/___/___    | ___/___/___       |
| - Attain operational level | ___/___/___    | ___/___/___       |

- e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly: \_\_\_\_\_

**B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).**

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: \_\_\_\_\_

| POLLUTANT                                   | MAXIMUM DAILY DISCHARGE |       | AVERAGE DAILY DISCHARGE |       |                   | ANALYTICAL METHOD | ML / MDL |
|---|-------------------------|-------|-------------------------|-------|-------------------|-------------------|----------|
|   | Conc.                   | Units | Conc.                   | Units | Number of Samples |                   |          |
| CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS. |                         |       |                         |       |                   |                   |          |
| AMMONIA (as N)                              |                         |       |                         |       |                   |                   |          |
| CHLORINE (TOTAL RESIDUAL, TRC)              |                         |       |                         |       |                   |                   |          |
| DISSOLVED OXYGEN                            |                         |       |                         |       |                   |                   |          |
| TOTAL KJELDAHL NITROGEN (TKN)               |                         |       |                         |       |                   |                   |          |
| NITRATE PLUS NITRITE NITROGEN               |                         |       |                         |       |                   |                   |          |
| OIL and GREASE                              |                         |       |                         |       |                   |                   |          |
| PHOSPHORUS (Total)                          |                         |       |                         |       |                   |                   |          |
| TOTAL DISSOLVED SOLIDS (TDS)                |                         |       |                         |       |                   |                   |          |
| OTHER                                       |                         |       |                         |       |                   |                   |          |

**END OF PART B.**

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

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OMB Number 2040-0086**BASIC APPLICATION INFORMATION****PART C. CERTIFICATION**

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

- ☒ Basic Application Information packet      Supplemental Application Information packet:
- \_\_\_\_\_ Part D (Expanded Effluent Testing Data)
- \_\_\_\_\_ Part E (Toxicity Testing: Biomonitoring Data)
- \_\_\_\_\_ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)
- \_\_\_\_\_ Part G (Combined Sewer Systems)

**ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title      Leonard W. Sandridge, Jr. Executive Vice President and Chief Operating Office

Signature      

Telephone number      (434) 924-3252

Date signed      9/14/2007

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

**SEND COMPLETED FORMS TO:**

## VPDES PERMIT APPLICATION ADDENDUM - SUPPLEMENTARY INFORMATION

### A. General Information (VPDES – Permit No. VA0075361)

1. Entity to whom the permit is to be issued: Mountain Lake Biological Research Station  
*Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.*
2. Classify the discharge as one of the following by checking the appropriate line:  
  
      X   a. Existing discharge  
    \_\_\_\_\_ b. Proposed discharge  
    \_\_\_\_\_ c. Proposed expansion of an existing discharge

### B. Location

1. Is this facility located within city or town boundaries?   Y (N)
2. (New Issuances & Modifications Only) What is the tax map parcel number for the land where this facility is located?   NA
3. For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?   NA
4. What is the total acreage of the property on which the treatment plant is located? 0.11 acres for plant and 575 acres for the entire research station.
5. Give the minimum elevation of the treatment plant site. 3800 feet
6. Flood elevations of the treatment plant site:  
    25 year flood   NA   feet – (not in designated floodplain)  
    100 year flood   NA   feet – (not in designated floodplain)
7. Attach to the back of this application a location map(s) which may be traced from or is/are a production of a U.S. Geological Survey topographic quadrangle(s) or other appropriately scaled contour map(s). The location map(s) shall show the following: **See Figure 1**
  - a. Treatment Plant
  - b. Discharge point
  - c. Receiving waters
  - d. Boundaries of the property on which the treatment plant is located, or to be located.
  - e. Distance from the treatment plant to the nearest: (Indicate "not applicable" for any distance greater than 2000 feet)
    - i. Residence
    - ii. Distribution line for potable water supply
    - iii. Reservoir, well, or other source of water supply
    - iv. Recreational area
  - f. Distance from the discharge point to the nearest: (Indicate "not applicable" for any distance greater than 15 miles)
    - i. Downstream community
    - ii. Upstream and downstream water intake points
    - iii. Shellfishing waters
    - iv. Wetlands area
    - v. Downstream impoundment
    - vi. Downstream recreational area

C. Discharge Description

1. Provide a brief description of the wastewater treatment scheme. Also, attach to the back of this application, a process flow diagram showing each process unit of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system.

Please see Attached plant description and plant diagram.

2. What is the design average flow of this facility? 0.009 MGD  
Industrial facilities: What is the max. 30-day avg. production level (include units)? NA
3. In addition to the above design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Y / N

If "Yes", please specify the other flow tiers (in MGD) or production levels: \_\_\_\_\_  
*Please consider: Is your facility's design flow considerably greater than your current flow? Do you plan to expand operations during the next five years?*

4. Nature of operations generating wastewater:  
Municipal  
100% of flow from domestic connections/sources  
Number of private residences to be served by the wastewater treatment facilities:  
X 0    1-49    50 or more  
  0   % of flow from non-domestic connections/sources
5. Mode of discharge:    Continuous    Intermittent X Seasonal  
Describe frequency and duration of intermittent or seasonal discharges:  
June through August
6. Identify the characteristics of the receiving stream at the point just above the facility's discharge point:  
   Permanent stream, never dry  
X Intermittent stream, usually flowing, sometimes dry  
   Ephemeral stream, wet-weather flow, often dry  
   Effluent-dependent stream, usually or always dry  
   Lake or pond at or below the discharge point  
   Other: \_\_\_\_\_

E. Anticipated Phasing Schedule for Plant Capacity - Proposed / Expanding Discharges

If this application is for a proposed or expanded discharge(s), complete the phasing schedule below beginning with the year in which construction completion is anticipated and progressing in increments of 5 years for 30 years thereafter.

Proposed Design Capacity: NA MGD

Anticipated Date of Construction Completion: \_\_\_\_\_, \_\_\_\_\_  
Month Year

| Years after Completion | Projected Flow (MGD) |
|------------------------|----------------------|
| 0                      |                      |
| 5                      |                      |
| 10                     |                      |
| 15                     |                      |
| 20                     |                      |
| 25                     |                      |
| 30                     |                      |

F. Interim Facilities NA

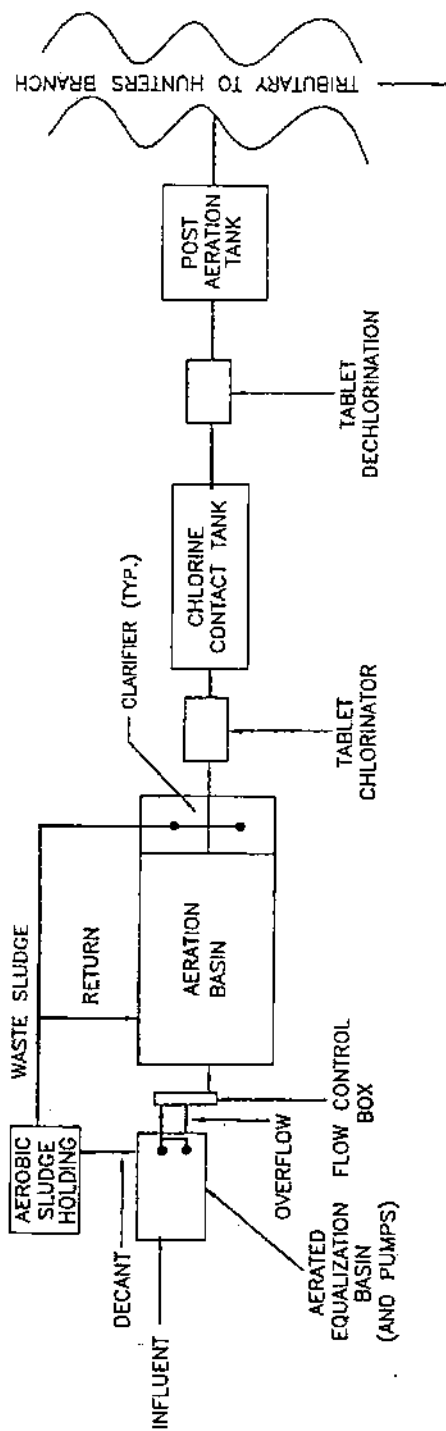
Are the wastewater treatment facilities interim? (designed for a useful life of less than 5 years)

\_\_\_\_\_ Yes \_\_\_\_\_ No

If so, provide the estimated date to be discontinued (month, year) NA, and the name and location of the intended replacement facility.

\_\_\_\_\_  
Name / Location





⊗ STAND ALONE  
POWER GENERATOR

# MOUNTAIN LAKE BIOLOGICAL RESEARCH STATION WASTEWATER TREATMENT PLANT

## FLOW DIAGRAM

FIGURE 1





## A. INTRODUCTION

During the summer and fall of 2001, the University of Virginia upgraded the Mountain Lake Biological Station Wastewater Treatment Plant to include influent flow equalization, sludge holding/digestion, and other operational improvements to allow increased operational control.

The upgrade of the facility included an equalization basin, influent flow control, additional aeration, upgraded chlorination disinfection system, and post aeration. A new operations building was constructed onsite to provide storage for operational equipment and provide laboratory space for operational testing.

This Operations & Maintenance (O & M) Manual serves as a replacement of the existing Operations & Maintenance Manual. This manual is operational in scope and will be updated as needed. The purpose of this manual is to promote efficient operation and maintenance of the wastewater treatment plant. This manual has been compiled in such a way as to provide ready access to information on each of the unit processes.

The guidelines set forth in this manual outline general procedures of how the plant should be operated to achieve the permit discharge requirements for the facility. In conjunction, the manufacturer's suggested maintenance schedules should be followed in order to prevent major mechanical and operational problems from developing.

The Mountain Lake Biological Station Wastewater Treatment Plant is operated under the conditions set forth by the Virginia Department of Environmental Quality VPDES permit VA0075361. This permit states that the treatment facility shall be operated by a licensed Class III operator.

This O&M Manual was compiled by Anderson & Associates, Inc., Consulting Engineers, Blacksburg, Virginia.

### 1. Collection System

The sewage collection system consists of 8 inch diameter gravity sewer in the Biological Station which conveys the wastewater to the treatment facility or the facility septic drainfield.

### 2. Septic Tank and Drainfield

Since the Biological Station is mainly occupied from mid June through August each year, the need for wastewater treatment is seasonal. During the rest of the year, flow from the site (mainly the caretaker's residence) is diverted to a septic tank and drainfield system at the site.

### 3. Treatment System

#### a. Flow Equalization

The purpose of the equalization tank is to serve as a "holding place" for influent sewage prior to treatment. A blower provides air to coarse air bubble diffusers keep the wastewater aerobic in the



equalization basin. A spare blower is provided onsite. The pumps located within the equalization basin are controlled by float switches and pump to a flow control box.

The overflow weir is located within the flow control box to regulate flow into the aeration basin. A 22 1/2° V-notch weir for flow measurement is provided in the flow control box. During high flow periods, the overflow pipe in the flow control box will divert excess flow back into the equalization basin.

b. Extended Aeration Treatment System

Secondary treatment is accomplished by the extended aeration modification of the activated sludge process. In the aeration basins the incoming wastewater is mixed with the biological floc (activated sludge) being maintained in the aeration basins and the mixture is aerated. The microorganisms present in the biological floc accomplish the treatment (stabilization) of the wastewater. The aerated mixture flows to the secondary clarifiers where the activated sludge is separated from the mixture by gravity settling, leaving a clear liquid, which is discharged, to the chlorine disinfection system.

c. Disinfection

The effluent from the extended aeration treatment unit flows through a 4 inch pipe to the disinfection system, which includes a tablet chlorinator, a baffled chlorine contact tank, and a tablet dechlorinator.

d. Post Aeration

The disinfected wastewater flows into the post aeration tank via an 4 inch pipe. Three flexible fine bubble membrane tube diffusers are installed near the bottom of the post aeration tank. The diffusers increase the dissolved oxygen concentration in the wastewater to acceptable limits for final discharge.

f. Sludge Handling and Disposal

Settled solids (activated sludge) are pumped from the bottom of the clarifiers by means of air lifts to the head of the aeration basin. The activated sludge is returned to the head end of the aeration basins while any excess sludge is pumped to the aerated sludge holding tank for further stabilization and gravity thickening.

Sludge handling will be handled in accordance with the proposed Sludge Management Plan.

Figure 1 presents a flow diagram for the UVA – Mountain Lake Biological System Wastewater Treatment Plant showing the various unit processes previously described.

## VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

## SCREENING INFORMATION

This application is divided into sections. Sections A pertain to all applicants. The applicability of Sections B, C and D depend on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Does this facility generate sewage sludge? ☒ Yes ☐ No

Does this facility derive a material from sewage sludge? ☐ Yes ☒ No

If you answered Yes to either, complete Section B (Generation Of Sewage Sludge Or Preparation Of A Material Derived From Sewage Sludge).

3. Does this facility apply sewage sludge to the land? ☐ Yes ☒ No

Is sewage sludge from this facility applied to the land? ☒ Yes ☐ No

If you answer No to all above, skip Section C.

If you answered Yes to either, answer the following three questions:

a. Does the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?  
☐ Yes ☒ No

b. Is sewage sludge from this facility placed in a bag or other container for sale or give-away for application to the land? ☐ Yes ☒ No

c. Is sewage sludge from this facility sent to another facility for treatment or blending? ☒ Yes ☐ No

If you answered No to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

If you answered Yes to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? ☐ Yes ☒ No

If Yes, complete Section D (Surface Disposal).

## SECTION A. GENERAL INFORMATION

All applicants must complete this section.

## 1. Facility Information.

- a. Facility name: Mountain Lake Biological Research Station Wastewater Treatment Plant
- b. Contact person: Julian McCroskey  
Title: Caretaker/Operator  
Phone: ( 540 ) 626-7171
- c. Mailing address:  
Street or P.O. Box: 335 Salt Pond Road  
City or Town: Pembroke State: VA Zip: 24136-3094
- d. Facility location:  
Street or Route At the end of State Route 668 (Salt Pond Road)  
County: Giles  
City or Town: Near Mountain Lake Resort (Pembroke) State: VA Zip: 24316
- e. Is this facility a Class I sludge management facility?    Yes   X   No
- f. Facility design flow rate: 0.009 mgd
- g. Total population served: Variable – average of 60 summer research students and staff
- h. Indicate the type of facility:  
   Publicly owned treatment works (POTW)  
  X   Privately owned treatment works  
   Federally owned treatment works  
   Blending or treatment operation  
   Surface disposal site  
   Other (describe):

## 2. Applicant Information. If the applicant is different from the above, provide the following:

- a. Applicant name: University of Virginia, Facilities Management
- b. Mailing address:  
Street or P.O. Box: P.O. Box 400726, University of Virginia  
City or Town: Charlottesville State: VA Zip: 22906-4726
- c. Contact person: Walter Rodgers  
Title: Project Manager  
  
Phone: (434 ) 982-4665
- d. Is the applicant the owner or operator (or both) of this facility?  
  X   owner   X   operator
- d. Should correspondence regarding this permit be directed to the facility or the applicant?  
   facility   X   applicant

## 3. Permit Information.

- a. Facility's VPDES permit number (if applicable): VA0075361
- b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:  
Permit Number:                      Type of Permit:                       
NA

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country?    Yes   X   No If yes, describe:

**FACILITY NAME:** Mountain Lake Biological Station WWTP

**VPDES PERMIT NUMBER:** VA0075361

5. Topographic Map. Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility: (See Attached Map, Figure 1)
- Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
  - Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.
6. Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction. (See Attached Drawing, Figure 2)
7. Contractor Information. Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? X Yes    No  
If yes, provide the following for each contractor (attach additional pages if necessary).  
Name: Tickle Septic and Water, Inc  
Mailing address:  
Street or P.O. Box: 206 Magnolia Drive  
City or Town: Ripplemead State: VA Zip: 24150  
Phone: ( 540 ) 921-3841  
Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:  
State Health Department ID# 223-24H

If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s). NA

8. Pollutant Concentrations. Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

| POLLUTANT  | CONCENTRATION<br>(mg/kg dry weight) | SAMPLE<br>DATE | ANALYTICAL<br>METHOD | DETECTION LEVEL<br>FOR ANALYSIS |
|------------|-------------------------------------|----------------|----------------------|---------------------------------|
| Arsenic    |                                     |                |                      |                                 |
| Cadmium    |                                     |                |                      |                                 |
| Chromium   |                                     |                |                      |                                 |
| Copper     |                                     |                |                      |                                 |
| Lead       |                                     |                |                      |                                 |
| Mercury    |                                     |                |                      |                                 |
| Molybdenum |                                     |                |                      |                                 |
| Nickel     |                                     |                |                      |                                 |
| Selenium   |                                     |                |                      |                                 |
| Zinc       |                                     |                |                      |                                 |

9. Certification. Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

X Section A (General Information)

X Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)

   Section C (Land Application of Bulk Sewage Sludge)

   Section D (Surface Disposal)

**FACILITY NAME:** Mountain Lake Biological Station WWTP

**VPDES PERMIT NUMBER:** VA0075361

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: Leonard W. Sandridge, Jr., Executive Vice President and COO

Signature



Date Signed

9/14/2007

Telephone number (434) 924-3252

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

FACILITY NAME: Mountain Lake Biological Station WWTP

VPDES PERMIT NUMBER: VA0075361

**SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION  
OF A MATERIAL DERIVED FROM SEWAGE SLUDGE**

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. Amount Generated On Site.  
Total dry metric tons per 365-day period generated at your facility: 5 dry metric tons
2. NA Amount Received from Off Site. If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.
  - a. Facility name:
  - b. Contact Person:  
Title:  
Phone ( )
  - c. Mailing address:  
Street or P.O. Box:  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
  - d. Facility Address:  
(not P.O. Box)
  - e. Total dry metric tons per 365-day period received from this facility: \_\_\_\_\_ dry metric tons
  - f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:
3. Treatment Provided at Your Facility.
  - a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?  
Class A Class B X Neither or unknown
  - b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: Short duration aerobic digestion provides partial treatment prior to disposal in offsite POTW
  - c. Which vector attraction reduction option is met for the sewage sludge at your facility?  
Option 1 (Minimum 38 percent reduction in volatile solids)  
Option 2 (Anaerobic process, with bench-scale demonstration)  
Option 3 (Aerobic process, with bench-scale demonstration)  
Option 4 (Specific oxygen uptake rate for aerobically digested sludge)  
Option 5 (Aerobic processes plus raised temperature)  
Option 6 (Raise pH to 12 and retain at 11.5)  
Option 7 (75 percent solids with no unstabilized solids)  
Option 8 (90 percent solids with unstabilized solids)  
X None or unknown
  - d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: None
  - e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: None
4. NA Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge).  
(If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)
  - a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land:  
\_\_\_\_\_ dry metric tons
  - b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?  
Yes No

**FACILITY NAME: Mountain Lake Biological Station WWTP**

**VPDES PERMIT NUMBER: VA0075361**

5. NA Sale or Give-Away in a Bag or Other Container for Application to the Land.

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

- a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: \_\_\_\_\_ dry metric tons
- b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending.

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

- a. Receiving facility name: Peppers Ferry Regional Wastewater Treatment Authority
- b. Facility contact: Clarke Wallcraft  
Title: Executive Director  
Phone: ( 540) 639-3947
- c. Mailing address:  
Street or P.O. Box: P.O. Box 2950  
City or Town: Radford State: VA Zip: 24143
- d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility: 5 dry metric tons
- e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:  

|                       |  |
|-----------------------|--|
| <u>Permit Number:</u> | <u>Type of Permit:</u>   |
| <u>VA0062685</u>      | <u>VPDES</u>   |
| <u>180-94</u>         | <u>Pulaski County Special Use: Disposal Wastewater Residue</u> |
- f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility? X Yes    No  
Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?  
   Class A    Class B    Neither or unknown  
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: Anaerobic Digestion
- g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? X Yes    No  
Which vector attraction reduction option is met for the sewage sludge at the receiving facility?  
X Option 1 (Minimum 38 percent reduction in volatile solids)  
   Option 2 (Anaerobic process, with bench-scale demonstration)  
   Option 3 (Aerobic process, with bench-scale demonstration)  
   Option 4 (Specific oxygen uptake rate for aerobically digested sludge)  
   Option 5 (Aerobic processes plus raised temperature)  
   Option 6 (Raise pH to 12 and retain at 11.5)  
   Option 7 (75 percent solids with no unstabilized solids)  
   Option 8 (90 percent solids with unstabilized solids)  
   None unknown  
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge: Anaerobic Digestion
- h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?  
   Yes X No  
If yes, describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:
- i. If you answered yes to f., g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G. (NA)



**FACILITY NAME:** Mountain Lake Biological Station WWTP

**VPDES PERMIT NUMBER:** VA0075361

- j. Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? ☐ Yes ☒ No  
If yes, provide a copy of all labels or notices that accompany the product being sold or given away.
- k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? ☒ Yes ☐ No. If no, provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.  
Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported. From Mountain Lake Biological Research Station on southwest on State Route 668 to State Route 613(Mountain Lake Road) to U.S. Route 460 East to State Route 114 to State Route 1200 (Mason Street) to Peppers Ferry plant entrance. Hauling will occur in spring and fall during mid morning or early afternoon to avoid peak commuter and school bus traffic times.

**7. NA Land Application of Bulk Sewage Sludge.**

(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6; complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

- a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites: \_\_\_\_\_ dry metric tons
- b. Do you identify all land application sites in Section C of this application? ☐ Yes ☐ No  
If no, submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).
- c. Are any land application sites located in States other than Virginia? ☐ Yes ☐ No  
If yes, describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.
- d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

**8. NA Surface Disposal.**

(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

- a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: \_\_\_\_\_ dry metric tons
- b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?  
☐ Yes ☐ No  
If no, answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.
- c. Site name or number:
- d. Contact person:  
Title:  
Phone: (    )  
Contact is: ☐ Site Owner ☐ Site operator
- e. Mailing address.  
Street or P.O. Box:  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: \_\_\_\_\_ dry metric tons
- g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:  
Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**9. NA Incineration.**

(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

**FACILITY NAME: Mountain Lake Biological Station WWTP**

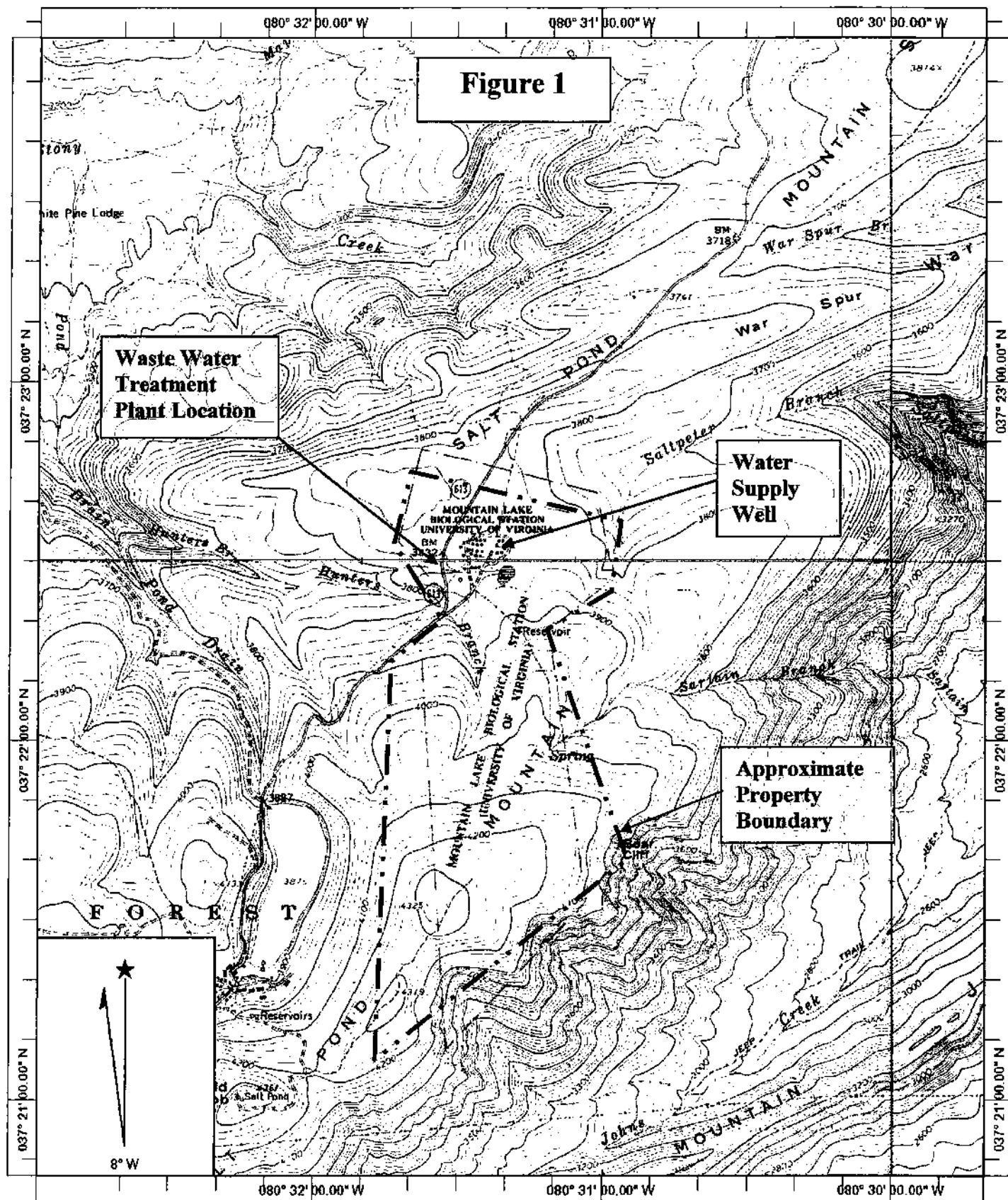
**VPDES PERMIT NUMBER: VA0075361**

- a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: \_\_\_\_\_ dry metric tons
- b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?  
\_\_\_ Yes \_\_\_ No  
If no, answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.
- c. Incinerator name or number:
- d. Contact person:  
Title:  
Phone: (    )  
Contact is: \_\_\_ Incinerator Owner \_\_\_ Incinerator Operator
- e. Mailing address.  
Street or P.O. Box:  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: \_\_\_\_\_ dry metric tons
- g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing of sewage sludge at this incinerator:  
Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**10. NA Disposal in a Municipal Solid Waste Landfill.**

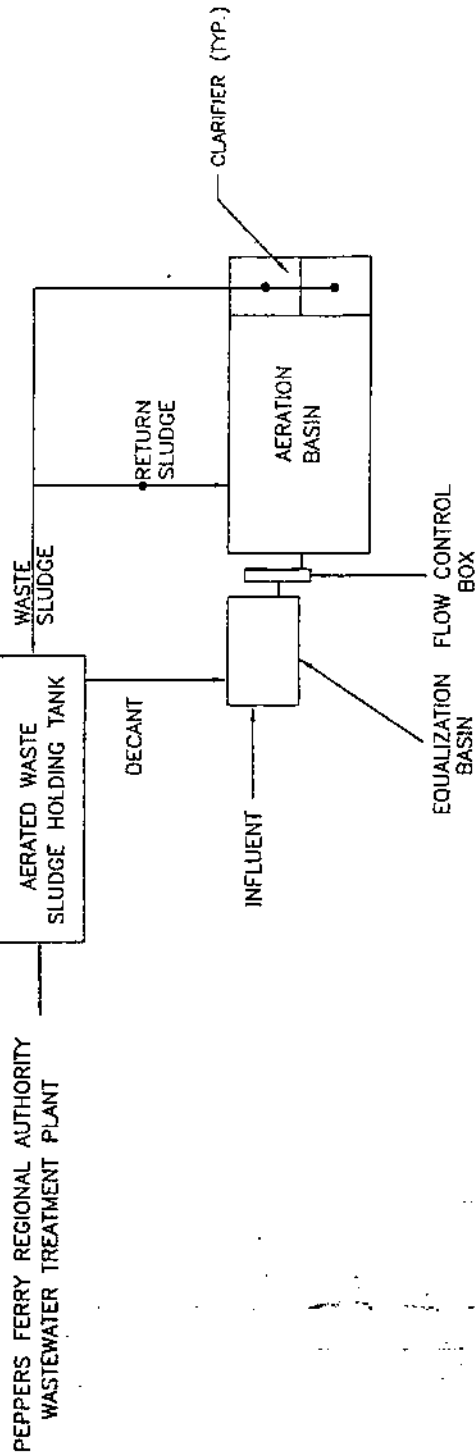
(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

- a. Landfill name:
- b. Contact person:  
Title:  
Phone: (    )  
Contact is: \_\_\_ Landfill Owner \_\_\_ Landfill Operator
- c. Mailing address.  
Street or P.O. Box:  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- d. Landfill location.  
Street or Route #:  
County:  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:  
\_\_\_\_\_ dry metric tons
- f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:  
Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?  
\_\_\_ Yes \_\_\_ No
- h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? \_\_\_ Yes \_\_\_ No
- i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? \_\_\_ Yes \_\_\_ No  
Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported.



Name: EGGLESTON Quadrangle  
 Date: 9/12/2007  
 Scale: 1 inch equals 2000 feet

Location: 037° 22' 22.26" N 080° 31' 19.23" W  
 Caption: Mountain Lake Biological Station



MOUNTAIN LAKE BIOLOGICAL RESEARCH STATION WASTEWATER TREATMENT PLANT  
SLUDGE PROCESSES

FIGURE 2

UNIVERSITY  
OF VIRGINIA

ENVIRONMENTAL HEALTH *and* SAFETY  
Special Materials Handling Facility

RECEIVED

BLF

AUG 29 2007

August 27, 2007

Ms. Becky France  
Environmental Engineer Senior  
Virginia Department of Environmental Quality  
3019 Peters Creek Road  
Roanoke, VA 24019

RE: VPDES Permit No. VA0075361, Mountain Lake Biological Research Station, BOD and TSS  
Analysis Waiver

Dear Ms. France,

The purpose of this letter is to request waivers to allow data substitutions in the Form 2A NPDES application for the University of Virginia (UVA) Mountain Lake Biological Station sewage treatment plant. First, UVA is requesting a waiver to allow the UVA to use the BOD and TSS data collected under our existing permit during our normal monitoring operations in lieu of the 24-hour composite samples specified in the permit application. This waiver is based on the very short seasonal (summertime) operation of this plant. Also, I am requesting a waiver to allow UVA to use the E. coli data collected during the study conducted from June through August 2003 in lieu of the fecal coliform data request in the permit application.

If you or your staff have any questions, please contact me at 434-982-4901 or by email [sitler@virginia.edu](mailto:sitler@virginia.edu). I will forward the draft application to you by email in the next few days.

Sincerely,



Jeffrey A. Sitler, CPG  
Environmental Compliance Manager

CC: Julian McCroskey  
Walter Rogers